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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: John Wilkes	Examiner: Anh Ly
Serial No. 09/927,163	Art Unit: 2162
Filed: August 9, 2001	Confirmation No. 4638
Entitled: SELF-DISENTANGLING DATA STORAGE TECHNIQUE	**APPEAL BRIEF**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir/Madame:

This is Applicant's brief on appeal from the final office action mailed on February 7, 2007.

(i) Real Party in Interest

The real party in interest is Hewlett-Packard Development Company, L.P., the assignee of record, which is a wholly-owned affiliate of Hewlett-Packard Company.

(ii) Related Appeals and Interferences

The Applicant is not aware of any appeals or interferences related to the above-identified patent application.

(iii) Status of Claims

Claims 1-25 and 27-33 are pending in this application. Claims 1-25 and 27-33 have been finally rejected and are the subject of this appeal. Claim 26 is canceled.

(iv) Status of Amendments

All amendments have been entered.

(v) Summary of Claimed Subject Matter

Background

Machine-readable data is generally stored digitally, as a series of logic "ones" and "zeros." For example, such data may be stored using optical, magnetic and/or electronic storage devices which may include, for example, solid-state memory devices, magnetic tape drives and optical or magnetic disk drives and arrays. Applicant's specification, page 1, lines 9-13.

Often, it is desired to store a collection of data for later retrieval in case the original version is changed, lost or damaged. For example, a back-up copy of the data may be placed on storage media, such as a magnetic tape or floppy disk. In order for the data to be understood upon retrieval, it is generally necessary to know the format in which the data is arranged. Otherwise, the data will appear to be a random series of ones and zeros without meaning. Thus, standardized formats, such as "CPIO" (CoPy In/Out) and "TAR" (Tape ARchive) may be used for archiving data. These schemes have a drawback in that data access functionality is limited. For example, they generally require that the entire stored data structure be reconstructed. However, under certain circumstances, it may be desired to reconstruct less than the entire data structure. Applicant's specification, page 1, lines 14-25.

Another conventional technique for archiving data is to store the data in the same format in which the software application that was used to generate the data stores and uses the data. This approach, however, has a drawback in that such application-specific data formats tend to change over time. Thus, older data formats may not be supported by newer versions of the application software. Applicant's specification, page 1, lines 26-31.

A conventional technique for reconstructing data is to append a software routine to the beginning of the original data that reconstructs the entire original data when run over the data. For example, a simple "uncompress" program is often placed at the beginning of a piece of compressed email that is able to decode the compressed format of the email data that follows. This technique has a drawback in that it also generally requires that the entire data structure be reconstructed. Applicant's specification, page 2, lines 1-7.

Accordingly, it would be desirable to provide a technique for the storage of machine-readable data that overcomes drawbacks associated with conventional storage and reconstruction techniques. It is to these ends that the present invention is directed. Applicant's specification, page 2, lines 8-11.

Claim 1

Applicant's claim 1 is an independent claim which is directed toward "[a] method of retrieving data from a data storage medium." Figure 1 of the Applicant's specification illustrates a data storage medium 100 upon which data can be stored and from which the data can be retrieved. Figure 2 of the Applicant's specification illustrates a flowchart of a method by which data can be retrieved from a data storage medium. In addition, the

Applicant's specification explains at page 4, lines 18-21, that the medium 100 may be a magnetic tape, a magnetic disk (e.g., floppy or hard disk), optical storage (e.g., CD or DVD) or solid-state storage (e.g., RAM or DRAM).

Steps of the method of claim 1 include "loading a program from the data storage medium into a computer system, the program including at least a first routine for responding to a first request type for access to data stored on the data storage medium and a second routine for responding to a second request type for access to the same data stored on the data storage medium." The Applicant's specification explains at page 4, lines 24-25, that a stored software program 108 may be stored on the media 100 along with data 102-106. This is shown in Figure 1 of the Applicant's specification. The Applicant's specification at page 6, lines 11-14, also explains that a step of the method involves retrieving the program 108 from the media 100 and loading the program into a computer system. Figure 3 of the Applicant's specification shows the program 108 being loaded into a computer system 400 while Figure 4 shows an exemplary computer system in more detail. As is also explained at page 5, lines 1-3, the program 108 may include one or more software routines that may be invoked in response to requests for access to the data 102-106. As explained at page 7, lines 13-22, a request for access to the data may be one of two principle types: for example, one type of request may be to access the data as though the data were an image backup or a set of logical volumes. Another type of request, explained at page 7, line 27, to page 8, line 4, may be to access the data as though the data were a file system.

Claim 1 recites "the data being stored in accordance with an archival format." As explained in the Applicant's specification at page 6, line 4-6, the data may be stored in

accordance with an archival format, such as CPIO (CoPy In/Out) or TAR (Tape ARchive).

Claim 1 also recites "receiving a request for access to data stored on the data storage medium." As explained in the Applicant's specification at page 7, lines 5-12, a request for access to the data may be received, for example, from an application program operating on the computer system 400 which requires access to some or all of the data.

Claim 1 further recites "determining whether the request is of the first type or the second type." As explained in the Applicant's specification at page 7, lines 13-14, the request may be, for example, one of two principle types. And, as explained at page 7, lines 11-12, a determination may be made as to the type of the request which was received.

In addition, claim 1 recites "calling the first routine for accessing the data when the request is of the first type and calling the second routine for accessing the data when the request is of the second type." As explained in the Applicant's specification at page 7, line 14, to page 8, line 8, a routine is called that is appropriate to the type of the request.

Finally, claim 1 recites "presenting the requested data." As explained in the Applicant's specification at page 8, lines 9-10, the requested data may be returned to the requesting application.

Storing the program that can be used to access the data along with the data, as in Applicant's claim 1, isolates the data storage format from the application used to generate the data. This minimizes problems caused by outdated data storage formats. Further, the provision of multiple routines for accessing the data allows flexibility in accessing the

data; for example, the data can be completely or partially reconstructed, as needed. See, Applicant's specification at page 2, lines 19-23.

Claim 2

Claim 2 is dependent from claim 1 and recites "wherein the first routine implements a first set of operations and the second routine implements a second set of operations." The Applicant's specification explains at page 3, lines 6-9, page 5, lines 15-26 and page 8, line 28, to page 9, line 1, that the first routine may implement a first set of operations (e.g., including file system operations) while the second routine may implement a second set of operations (e.g., including standardized archival operations such as operations selected from CPIO and TAR).

Claim 3

Claim 3 is dependent from claim 2 and recites "wherein the first set of operations includes file system operations." The Applicant's specification explains at page 3, lines 6-7, page 5, lines 24-26, and page 8, line 29, to page 9, line 1, that the first set of operations may include file system operations.

Claim 4

Claim 4 is dependent from claim 3 and recites "wherein the second set of operations includes standardized archival operations." The Applicant's specification explains at page 3, lines 7-9, page 5, lines 21-24, and page 8, lines 28-29, that the second

set of operations may include standardized archival operations such as operations selected from CPIO and TAR.

Claim 5

Claim 5 is dependent from claim 4 and recites "wherein the second set of operations includes operations selected from CPIO and TAR." The Applicant's specification explains at page 3, lines 7-9, and page 8, lines 28-29, that the second set of operations may include operations selected from CPIO and TAR.

Claim 6

Claim 6 is dependent from claim 1 and recites "wherein the first request type includes a request for one or more files from a file system." The Applicant's specification explains at page 3, lines 9-10, and page 7, line 27, to page 8, line 4, that the first request type may include a request for one or more files from a file system.

Claim 7

Claim 7 is dependent from claim 1 and recites "wherein said presenting includes reformatting all of the data as a file structure." The Applicant's specification explains at page 5, lines 1-3, that the requests may be invoked in response to requests for reformatting the data. And, at page 3, lines 10-11, and page 6, lines 6-9, the Applicant's specification explains that the data may be presented reformatted as a file structure.

Claim 8

Claim 8 is dependent from claim 6 and recites "wherein the second request type includes a request for one or more logical volumes." The Applicant's specification explains at page 3, lines 11-12, and page 7, lines 23-26, that second request type may include a request for one or more logical volumes, in which case, an application program interface (API) routine may be called that is appropriate to this type of request.

Claim 9

Claim 9 is dependent from claim 6 and recites "wherein the second request type includes a request for an image copy of the data." The Applicant's specification explains at page 3, lines 11-12, that the second request type may include a request for an image copy of the data.

Claim 10

Claim 10 is dependent from claim 1 and recites "wherein the first request type is by a first target system type and the second request type is by a second target system type." The Applicant's specification explains at page 5, lines 15-21, that the program 108 may include one or more software routines or application program interfaces (APIs) to accommodate different target systems, such as different virtual machine architectures, different instruction sets, different computer languages, and different operating system variants. Accordingly, as explained at page 3, lines 12-14, the first request type may be by a first target system type while the second request type may be by a second target system type.

Claim 11

Claim 11 is dependent from claim 10 and recites "wherein said presenting the requested data includes formatting the data in accordance with the target system type." The Applicant's specification explains at page 3, lines 14-16, that presenting the requested data may include formatting the data in accordance with the target system type.

Claim 12

Claim 12 is dependent from claim 1 and recites "wherein the program includes information about the data." The Applicant's specification explains at page 5, lines 27-30, that the program 108 may include information about the data stored on the media, such as a description of its contents or a directory of files included in the data.

Claim 13

Claim 13 is dependent from claim 12 and recites "wherein the information about the data includes a file system directory." The Applicant's specification explains at page 5, lines 27-30, that the information about the data stored on the media may include a directory of files included in the data.

Claim 14

Claim 14 is dependent from claim 1 and recites "wherein the data is stored on the data storage medium as raw data blocks." The Applicant's specification explains at page 6, lines 4-5, that the data 102-106 may be stored as raw data blocks.

Claim 15

Applicant's claim 15 is an independent claim which is directed toward "[a]n article of manufacture comprising a computer usable medium having data stored thereon." Figure 1 of the Applicant's specification illustrates a data storage medium 100 upon which data 102-106 can be stored and from which the data 102-106 can be retrieved. The Applicant's specification further explains at page 4, lines 16-24, that the data 102-106 is stored on the medium 100. Page 4, lines 16-24, also explains that the medium 100 may be a magnetic tape, a magnetic disk (e.g., floppy or hard disk), optical storage (e.g., CD or DVD) or solid-state storage (e.g., RAM or DRAM).

Claim 15 also recites that the computer usable medium has "computer readable program code stored thereon." As explained in the Applicant's specification at page 4, lines 16-26, a computer program 108 may also be stored on the medium 100, along with the data 102-106. The program 108 is shown stored on the medium 100 in Figure 1 of the Applicant's specification.

Claim 15 further recites "the computer readable program code including a first routine for accessing the data in response to a request for access to the data in an archival format." As explained in the Applicant's specification at page 5, lines 1-3, the program 108 may include one or more software routines that may be invoked in response to requests for access to the data 102-106. And, as explained at page 6, line 4-6, the data may be stored in accordance with an archival format such as CPIO (CoPy In/Out) or TAR (Tape ARchive). The Applicant's specification further explains at page 7, lines 14-

17, that one type of request may be to access the data 102-106 may assume that the data 102-106 is stored according to a standardized archival format, such as CPIO or TAR.

In addition, claim 15 recites that the computer readable program code also includes "a second routine for accessing the data in response to a request for access to the data in a non-archival format." As explained at page 7, line 27, to page 8, line 4, another type of request may be to access the data as though the data were a file system, which is a non-archival format.

Claim 16

Claim 16 is dependent from claim 15 and recites "wherein said second routine supports accessing the data as a logical volume." The Applicant's specification explains at page 3, lines 11-12, and at page 7, lines 13-22, that a request for access to the data may be to access the data as though the data were a set of logical volumes and that one or more logical volumes or particular logical blocks may be specified. And, as explained at page 7, line 14-26, a routine is called that is appropriate to the type of the request.

Claim 17

Claim 17 is dependent from claim 15 and recites "wherein said first routine supports accessing the data as an image copy." The Applicant's specification explains at page 4, lines 22-24, that the data 102-106 may be stored on the media 100 as an image back-up collection, that is, as raw data blocks that are not specially reformatted for storage. And, at page 7, lines 14-15, that a request may be to access the data 102-106 as though the data 102-106 were an image backup.

Claim 18

Claim 18 is dependent from claim 15 and recites "wherein the second routine supports accessing all of the data as a file structure." The Applicant's specification explains at page 7, line 27, to page 8, line 4, that a request may be to access the data as though the data were a file system. And, page 7, line 31, to page 8, line 2, it explains that an example of this type of request may be to reconstruct the entire data collection 102-106 as a file system (e.g., to be stored on the hard drive of the computer system 400).

Claim 19

Claim 19 is dependent from claim 15 and recites "wherein the second routine supports accessing the data as at least one specified file." The Applicant's specification explains at page 7, line 27, to page 8, line 4, that a request may be to access the data as though the data were a file system. And, page 7, line 31, to page 8, line 2, it explains that an example of this type of request is a request to retrieve a specified file (e.g., by file name: "XXX/YYY").

Claim 20

Claim 20 is dependent from claim 15 and recites "wherein the program code includes information about the data." The Applicant's specification explains at page 5, lines 27-30, that the program 108 may include information about the data 102-106 stored on the media 100 and that this may include, for example, the amount of data 102-106, a description of its contents or a directory of files included in the data 102-106.

Claim 21

Claim 21 is dependent from claim 20 and recites "wherein the information about the data includes a file system directory." The Applicant's specification explains at page 5, lines 27-30, that the information which is included in the program 108 about the data 102-106, may include, for example, the amount of data, a description of its contents or a directory of files included in the data.

Claim 22

Applicant's claim 22 is an independent claim which is directed toward "[a]n article of manufacture comprising a computer usable medium having data stored thereon." Figure 1 of the Applicant's specification illustrates a data storage medium 100 upon which data 102-106 can be stored and from which the data 102-106 can be retrieved. The Applicant's specification explains at page 4, lines 16-24, the data 102-106 is stored on the medium 100. At page 4, lines 16-24, it also explains that the medium 100 may be a magnetic tape, a magnetic disk (e.g., floppy or hard disk), optical storage (e.g., CD or DVD) or solid-state storage (e.g., RAM or DRAM).

Claim 22 also recites that the computer usable medium has "computer readable program code stored thereon." As explained in the Applicant's specification at page 4, lines 16-26, a computer program 108 may also be stored on the medium 100, along with the data 102-106. The program 108 is shown stored on the medium 100 in Figure 1 of the Applicant's specification.

Claim 22 further recites "the computer readable program code including a first routine for accessing the data in response to a request from a first target system type." In addition, claim 22 recites that the computer readable program code includes "a second routine for accessing the data in response to a request from a second target system type."

The Applicant's specification explains at page 5, lines 1-3, that the program 108 may include one or more software routines that may be invoked in response to requests for access to the data 102-106. The Applicant's specification also explains at page 5, lines 15-21, that the software routines or application program interfaces (APIs) of the program 108 accommodate different target systems, such as different virtual machine architectures, different instruction sets, different computer languages, and different operating system variants. Accordingly, as explained at page 3, lines 12-14, the first request type may be by a first target system type while the second request type may be by a second target system type.

Claim 23

Claim 23 is dependent from claim 22 and recites "wherein said program presents the requested data formatted in accordance with the target system type." The Applicant's specification explains at page 9, lines 15-21, that retrieved data may be presented differently to different target systems, even if essentially the same request is received; thus, for example, a request for a specific file may return the specified file, but formatted differently depending on the type of target system that made the request.

Claim 24

Claim 24 is dependent from claim 23 and recites "wherein the data is stored on the data storage medium as raw data blocks." The Applicant's specification explains at page 6, lines 4-5, that the data 102-106 may be stored as raw data blocks.

Claim 25

Applicant's claim 25 is an independent claim which is directed toward "[a]n article of manufacture comprising a computer usable data storage medium having data stored thereon." Figure 1 of the Applicant's specification illustrates a data storage medium 100 upon which data 102-106 can be stored and from which the data 102-106 can be retrieved. The Applicant's specification explains at page 4, lines 16-24, that the data 102-106 is stored on the medium 100. At page 4, lines 16-24, it also explains that the medium 100 may be a magnetic tape, a magnetic disk (e.g., floppy or hard disk), optical storage (e.g., CD or DVD) or solid-state storage (e.g., RAM or DRAM).

Claim 25 also recites that the computer usable medium has "computer readable program code stored on secondary storage associated with the data storage medium." The Applicant's specification explains at page 4, lines 24-30, that rather than the program 108 being stored on the same storage medium 100 as the data 102-106, the program 108 may be stored on secondary storage associated with the media 100, such as a "smart chip" built into a magnetic tape cartridge.

Claim 25 further recites "the computer readable program code including a first routine for accessing the data in response to a request of a first request type." In addition, claim 25 recites that the computer readable program code includes "a second routine for

accessing the data in response to a second request type." The Applicant's specification explains at page 7, lines 13-22, that a request for access to the data may be one of two principle types: for example, one type of request may be to access the data as though the data were an image backup or a set of logical volumes. As explained at page 7, line 27, to page 8, line 4, another type of request may be to access the data as though the data were a file system.

Finally, claim 25 recites "wherein the secondary storage is built into a cartridge for the data storage medium." As explained in the Applicant's specification at page 4, lines 24-30, rather than the program 108 being stored on the same storage medium 100 as the data 102-106, the program 108 may be stored on secondary storage associated with the media 100, such as a "smart chip" built into a magnetic tape cartridge.

Claim 27

Claim 27 is dependent from claim 1 and recites "wherein the data is stored on the data storage medium as one or more raw data blocks." The Applicant's specification explains at page 6, lines 4-5, that the data 102-106 may be stored as raw data blocks.

Claim 28

Claim 28 is dependent from claim 1 and recites "wherein the data storage medium is removable." The applicant's specification at page 4, lines 18-21, gives several examples of the data storage medium, such as magnetic tape, magnetic disk (e.g., floppy or hard disk), optical storage (e.g., CD or DVD) or solid-state storage (e.g., RAM or DRAM). At least some of these examples are removable.

Claim 29

Claim 29 is dependent from claim 15 and recites "wherein said first routine supports accessing the data as one or more raw data blocks." The Applicant's specification explains at page 6, lines 4-5, that the data 102-106 may be stored as raw data blocks.

Claim 30

Claim 30 is dependent from claim 15 and recites "wherein the data storage medium is removable." Applicant's specification at page 4, lines 18-21, gives several examples of the data storage medium, such as magnetic tape, magnetic disk (e.g., floppy or hard disk), optical storage (e.g., CD or DVD) or solid-state storage (e.g., RAM or DRAM). At least some of these examples are removable.

Claim 31

Claim 31 is dependent from claim 22 and recites "wherein the data is stored in accordance with an archival format." The Applicant's specification explains at page 6, line 4-6, that the data may be stored in accordance with an archival format such as CPIO (CoPy In/Out) or TAR (Tape ARchive).

Claim 32

Claim 32 is dependent from claim 22 and recites "wherein the data storage medium is removable." Applicant's specification at page 4, lines 18-21, gives several

examples of the data storage medium, such as magnetic tape, magnetic disk (e.g., floppy or hard disk), optical storage (e.g., CD or DVD) or solid-state storage (e.g., RAM or DRAM). At least some of these examples are removable.

Claim 33

Claim 33 is dependent from claim 25 and recites "wherein the data storage medium is removable." Applicant's specification at page 4, lines 18-21, gives several examples of the data storage medium, such as magnetic tape, magnetic disk (e.g., floppy or hard disk), optical storage (e.g., CD or DVD) or solid-state storage (e.g., RAM or DRAM). At least some of these examples are removable.

(vi) Grounds of Rejection to be Reviewed on Appeal

Whether claims 15-25 and 29-33 are unpatentable under 35 U.S.C. § 101 as allegedly being drawn to non-statutory subject matter.

Whether claims 1-25, and 26-33 are unpatentable under 35 U.S.C. § 103 as allegedly being obvious in view of U.S. Patent Publication No. 2002/0161784 by Tarenskeen (hereinafter "Tarenskeen") and U.S. Patent Publication No. 20020152194 to Sathyanarayan (hereinafter "Sathyanarayan").

(vii) Argument

a. Rejections under 35 U.S.C. § 101

Claims 15 and 22

Independent claims 15 and 22 were rejected under 35 U.S.C. § 101, as allegedly

being directed toward non-statutory subject matter since they are allegedly "lacking of real world useful result." See, office action mailed on Feb. 7, 2007, at page 2. In addition, the office action alleges that these claims "include all computer-readable codes stored on a computer-readable medium such as a CD, but without hardware implementing or executing these program codes or instructions. This is non-functional descriptive material, which is an abstract idea and is non-statutory subject matter." See, office action mailed on Feb. 7, 2007, at page 2.

As an initial matter, the Applicant would like to point out that this ground for rejection was raised for the first time in the office action mailed on Feb. 7, 2007, which office action was made final. See, "Office Action Summary" mailed on Feb. 7, 2007, at page 2. The Manual of Patent Examining Procedure (MPEP) states as follows:

> Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement...

Manual of Patent Examination Procedure, Section 706.07(a) (8th Ed. Sept. 2007).

The Applicant submits that the rejection was neither necessitated by amendment, nor based on information submitted in an information disclosure statement. As such, the finality of the office action was not in accordance with present practice as set forth in the MPEP.

The Applicant also respectfully disagrees with the substance of the rejection. Independent claims 15 and 22 are directed toward articles of manufacture comprising a computer usable medium having data stored thereon and having computer readable program code stored thereon. Claims 15 and 22 further recite that the computer readable

program code includes first and second routines that perform access to the data in response to requests for access to the data. In other words, claims 15 and 22 recite data structures and computer programs which are recorded on a computer readable medium and which impart functionality when employed as a computer component. It is well settled that claims of this type are statutory. See *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

The Manual of Patent Examining Procedure states as follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works, and a compilation or mere arrangement of data.
>
> Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)(discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory).

Manual of Patent Examination Procedure, Section 2106.01 (8th Ed. Sept. 2007).

Therefore, claims 15 and 22 are directed toward functional descriptive material which is recorded on computer-readable medium. Moreover, claims 15 and 22 are not

lacking of "real world useful result" at least because the descriptive material (i.e. data and computer code) imparts functionality of accessing (i.e. retrieving) the data using the computer code in response to requests for access to the data.

In view of the above, the Applicant respectfully submits that claims 15 and 22 are directed toward statutory subject matter. Claims 16-21, 23-24 and 29-32 are directed toward statutory subject matter at least because they depend from a statutory base claim 15 or 22. Therefore, the Applicant respectfully requests reversal of the rejection of these claims.

Claims 16-21

Claims 16-21 stand or fall together with claim 15 from which they depend.

Claim 23

Claim 23 is dependent from claim 22 and recites "wherein said program presents the requested data formatted in accordance with the target system type." Accordingly, claim 23 recites additional functionality which is imparted when the program is executed. Namely, that the requested data is presented formatted in accordance with the target system type. Therefore, this is an additional reason why claim 23 is statutory under the rationale of *In re Lowry*, cited above.

Claim 24

Claim 24 stands or falls together with claim 22 from which it depends.

Claim 25

Independent claim 25 was rejected under 35 U.S.C. 101 for the same reasons that independent claims 15 and 22 were rejected. The Applicant respectfully disagrees with the rejection. Claim 25 is directed toward an article of manufacture comprising a computer usable data storage medium having data stored thereon and having computer readable program code stored on secondary storage associated with the data storage medium. Claim 25 further recites that the secondary storage is built into a cartridge for the data storage medium.

Therefore, claim 25 recites two different storage media: one storing data and the other storing program code. Further, claim 25 recites that the secondary storage medium which stores the program code is built into a cartridge for the other data storage media. Accordingly, independent claim 25 recites an article of manufacture that comprises multiple different physical elements. Therefore, claim 25 is statutory. See, 35 U.S.C. § 101. See also, Manual of Patent Examining Procedure at 2106(IV)(A) ("The plain and unambiguous meaning of section 101 is that any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may be patented if it meets the requirements for patentability set forth in Title 35, such as those found in sections 102, 103, and 112.")(quoting *In re Alappat*, 33 F.3d 1526, 1542, 31 USPQ2d 1545, 1556 (Fed. Cir. 1994).

For at least this reason, the Applicant respectfully submits that claim 25 is directed toward statutory subject matter.

In addition, claim 25 recites that the computer readable program code includes first and second routines that perform access to the data in response to requests for access

to the data. In other words, claim 25 recites a computer program which is recorded on a computer readable medium and which imparts functionality when employed as a computer component. Therefore, claim 25 is directed toward functional descriptive material which is recorded on computer-readable medium. It is well settled that claims of this type are statutory. See *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Moreover, claim 25 is not lacking of "real world useful result" at least because the descriptive material (i.e. data and computer code) imparts functionality of accessing (i.e. retrieving) the data in response to requests for access to the data.

Claim 33 is directed toward statutory subject matter at least because it depends from a statutory base claim 25. Therefore, the Applicant respectfully requests reversal of the rejection of claims 25 and 33.

Claims 29-30

Claims 29-30 stand or fall together with claim 15 from which they depend.

Claims 31-32

Claims 31-32 stand or fall together with claim 22 from which they depend.

Claim 33

Claim 33 stands or falls together with claim 25 from which it depends.

b. *Rejections under 35 U.S.C. § 103*

Claim 1

Claim 1, along with all of the other pending claims, is rejected under 35 U.S.C. § 103 as allegedly being obvious in view of U.S. Patent Publication No. 2002/0161784 by Tarenskeen (hereinafter "Tarenskeen") and U.S. Patent Publication No. 20020152194 by Sathyanarayan (hereinafter "Sathyanarayan"). Regarding claim 1, the office action indicates that Tarenskeen discloses all of its limitations in paragraphs [0004], [0013], [0014], and [0019]-[0023] except that Tarenskeen does not teach "determining whether the request is of the first type or the second type." See, office action mailed on Feb. 7, 2007, at pages 3-4. However, the office action alleges that Sathyanarayan teaches this feature at paragraphs [0027]-[0028] and [0031] and that Sathyanarayan teaches that a "software program and the accessible data are stored on the same disk" at paragraph [0019]. See, office action mailed on Feb. 7, 2007 at page 5. The office action further alleges that it would have been obvious to combine the teachings of Tarenskeen with those of Sathyanarayan because:

> One having ordinary in the art would have found it motivated to utilize the use of determining the request type such as archive operation and file system operation as disclosed (Sathyanarayan's sections 0027-0028), into the system of Tarenskeen for the purpose of having archiving utilities for the Unix operating system such as CIPO and TAR and file system operations such as reading, writing and restoring operations (Sathyanarayan's sections 0001-0002, thereby, speeding up archival operations and a copy process is also speeded up by transferring data from /to data storage media and to minimize problems caused by the different types of storage devices having different data storage formats (Sathyanarayan's sections 0003-007).

Office action mailed on Feb. 7, 2007, at page 5.

The Applicant respectfully traverses the rejection. "Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." *Graham* v. *John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966). *See also*, *KSR Intl. Co. v. Teleflex Inc.*, 550 U.S. ___ (2007). Moreover, in order to properly reject a patent claim under 35 U.S.C. § 103, the claimed subject matter must be considered as a whole. *See* 35 U.S.C. § 103.

Tarenskeen explains in paragraph [0004] that archive and restore procedures traditionally involve transferring data from a source database to tape and, then, loading the data from the tape onto the target database. Tarenskeen further explains in paragraphs [0005]-[0006] that because the archive procedure is completed first, before the restore operation is started, migrating large amounts of data can take a very long time. Tarenskeen attempts to solve this problem with a system and method for migrating data from a source database system to a target database system using concurrent archive and restore. See, Title and Abstract of Tarenskeen. In its Abstract, Tarenskeen explains that utility modules of the source database system and the target database system communicate through a transfer medium to enable relatively fast data transfer. More particularly, an archive module communicates received data to the transfer medium while

a restore module receives data from the transfer medium and transfers the data to the second database. See, paragraph [0007] of Tarenskeen.

Sathyanarayan discloses a file archival method in which archival in a computer is performed by creating a process if an item to be copied is a directory, and alternatively, by copying the item if the item is a file. See, Title and Abstract of Sathyanarayan. The created process recursively performs the acts of creating or copying with an other item located in the directory. Abstract of Sathyanarayan. This speeds up copying by creating a number of processes that corresponds to the number of directories to be copied, though the number of processes may be limited. Abstract of Sathyanarayan.

Applicant's claim 1 recites "retrieving data from a data storage medium comprising ... loading a program from the data storage medium ... receiving a request for access to data stored on the data storage medium... accessing the data...". In other words, claim 1 requires that the program is loaded from the data storage medium and that the accessed data is stored on the data storage medium. This means that the program is loaded from the same data storage medium that stores the data to be accessed.

The office action mailed on Feb. 7, 2007, alleges that Tarenskeen teaches these features at paragraphs [0004], [0013], [0014], and [0019]-[0023]. See, office action mailed on Feb. 7, 2007, at pages 3-4. The Applicant respectfully disagrees. Rather, these portions of Tarenskeen describe operation of Tarenskeen's system for concurrent archive and restore. Nowhere does Tarenskeen teach or suggest that a program for accessing data is loaded from the same data storage medium that stores the data to be accessed, as is required by Applicant's claim 1.

The office action mailed on Feb. 7, 2007, also alleges that Sathyanarayan teaches that a "software program and the accessible data are stored on the same disk" at paragraph [0019] of Sathyanarayan. See, office action mailed on Feb. 7, 2007, at page 5. The Applicant respectfully disagrees. This portion of Sathyanarayan merely discusses that data may be copied from one disk to another disk or from one disk to the same disk. Nowhere does Sathyanarayan teach or suggest that a program for accessing data is loaded from the same data storage medium that stores the data to be accessed, as is required by Applicant's claim 1.

Therefore, neither Tarenskeen, nor Sathyanarayan teach or suggest that a program for accessing data is loaded from the same data storage medium that stores the data to be accessed, as is required by Applicant's claim 1. For at least this reason, claim 1 and its dependent claims 2-14 and 27-28 are allowable over Tarenskeen and Sathyanarayan, taken singly or in combination.

In view of the above, the applicant respectfully requests removal of the rejection of claims 2-14 and 27-28.

Moreover, Applicant's claim 1 recites that the program used to access the data includes a first routine for responding to a first request type for access to data stored on the data storage medium and a second routine for responding to a second request type for access to the same data stored on the data storage medium. Claim 1 further recites determining whether the request is of the first type or the second type and calling the first routine for accessing the data when the request is of the first type and calling the second routine for accessing the data when the request is of the second type. Therefore,

Applicant's claim 1 requires that the routine is chosen depending upon the nature of the request (i.e. its type) received for access to the data.

The office action alleges that Sathyanarayan discloses this feature of claim 1 at paragraphs [0027]-[0028] and [0031]. See, office action mailed on Feb. 7, 2007, at page 5. The Applicant respectfully disagrees. Rather, at paragraphs [0027]-[0028], Sathyanarayan discusses allocation of memory for performing its file copying. And, at paragraph [0031], Sathyanarayan discusses copying of symbolic links. Therefore, these portions of Sathyanarayan are completely unrelated to the feature of applicant's claim 1 which they are alleged to disclose, namely, that the routine for accessing data is chosen depending upon the nature of the request received for access to the data. That Tarenskeen does not disclose this feature is admitted in the office action. See, office action mailed on Feb. 7, 2007, at page 4.

The office action mailed on Feb. 7, 2007, appears to imply that because Sathyanarayan mentions archiving utilities CPIO and TAR in paragraphs [0001] and [0027] and because Sathyanarayan discusses copying files in paragraph [0028], this means that Sathyanarayan teaches that a routine for accessing data is chosen depending upon the nature of the request received for access to the data, as in Applicant's claim 1. The Applicant respectfully disagrees. It is clear from Applicant's claim 1 that the two recited routines are alternatives, in which one or the other is chosen depending upon the type of the request which is received for access to the data. In no place does Sathyanarayan teach or suggest that the archiving utilities CPIO and TAR and file copying are alternatives which are chosen depending upon a type of request received.

Therefore, the Applicant respectfully submits that this feature of Applicant's claim 1 is not taught or suggested by Sathyanarayan or Tarenskeen, taken singly or in combination. This is another reason why the rejection of Applicant's claim 1 and dependent claims 2-14 and 27-28, should be removed.

Further, the Applicant respectfully submits that even if Tarenskeen and Sathyanarayan did separately disclose the claim limitations which they are alleged to disclose, it would not have been obvious to combine them in the manner suggested in the office action mailed on Feb. 7, 2007. As explained above, Tarenskeen is directed toward migrating a database system using archive and restore operations which are concurrently active. See, Abstract and Summary of Tarenskeen. At paragraph [0002], Tarenskeen explains that the database being copied is a collection of logically related data comprising rows and columns, with each row representing an entity defined by the table about which the table contains information.

In contrast, Sathyanarayan is directed toward a file archival method in which a process is created if an item to be copied is a directory, and alternatively, the item is copied if it is a file. See, Title and Abstract of Sathyanarayan. This speeds up copying by creating a number of processes that corresponds to the number of directories to be copied, though the number of processes may be limited. Abstract of Sathyanarayan. Therefore, the file archival method of Sathyanarayan is specifically directed toward archiving a file system. Therefore, there would not have been a reason to modify Tarenskeen, which is specifically directed toward migrating a database system, with teachings of Sathyanarayan. Rather, Sathyanarayan and Tarenskeen are each separately directed toward dealing with the unique characteristics of file systems (in the case of

Sathyanarayan) or databases (in case of Tarenskeen). Therefore, there would not have been a reason to combine them in the manner suggested in the office action.

The office action suggests a person would have been motivated to combine Sathyanarayan into Tarenskeen based, in part, on a desire to speed up archival operations. See, office action mailed on Feb. 7, 2007, at page 5. While Tarenskeen and Sathyanarayan both discuss speed considerations (see, Tarenskeen at paragraphs [0005]-0006] and Sathyanarayan at paragraph [0009]), each separately resolves this issue in a unique environment. Particularly, Tarenskeen's solution is directed toward dealing with the unique characteristics of databases, whereas, Sathyanarayan's solution is directed toward dealing with the unique characteristics of file systems. Therefore, it would have not have been obvious that features of Sathyanarayan would be useful in the system of Tarenskeen.

Moreover, in paragraph [0005], Tarenskeen discusses and, then, dismisses as ineffective, the possibility of utilizing multiple threads for database migration. However, Sathyanarayan obtains its speed improvements by employing multiple threads. See paragraph [0009] of Sathyanarayan. Therefore, this discussion in Tarenskeen clearly teaches away from incorporating any features from Sathyanarayan into the system of Tarenskeen. Therefore, this is another reason why it would not have been obvious to combine the Tarenskeen and Sathyanarayan references.

The office action suggests a person would have been motivated to combine Sathyanarayan into Tarenskeen based, in part, on a desire to "minimize problems caused by the different types of storage devices having different storage formats." See, office action mailed on Feb. 7, 2007, at page 5. This is alleged to be based on paragraphs

[0003]-[0007] of Sathyanarayan. However, this portion of Sathyanarayan does not discuss problems caused by different types of storage devices having different storage formats. Rather, this portion of Sathyanarayan discusses difficulties in using the PAX utility in copying file systems. Therefore, this alleged motivation cannot come from Sathyanarayan. Rather, it appears to have come from the Applicant's own disclosure since the Applicant discusses difficulties in dealing with different data formats at page 1, lines 9-31. However, the Applicant's own disclosure cannot properly provide a motivation for combining prior art references. Therefore, the Applicant respectfully submits that this is another reason why it would not have been obvious to combine the Tarenskeen and Sathyanarayan references.

In view of the above, the Applicant respectfully requests reversal of the rejection of claim 1 and dependent claims 2-14 and 27-28.

Claim 2

Claim 2 is dependent from claim 1 and recites "wherein the first routine implements a first set of operations and the second routine implements a second set of operations." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation at paragraphs [0019]-[0023]. The Applicant respectfully disagrees. Rather, these portions of Tarenskeen describe operation of Tarenskeen's system for concurrent archive and restore. Claim 2 must be considered in conjunction with claim 1 from which it depends, as a whole. See, 35 U.S.C. § 103. As explained above in connection with claim 1, Tarenskeen does not disclose alternative routines which are

selected based on a type of request received for access to data. Accordingly, Tarenskeen also does not disclose that such routines include first and second sets of operations.

Therefore, this is another reason why claim 2 and its dependent claims 3-5 are allowable.

Claim 3

Claim 3 is dependent from claim 2 and recites "wherein the first set of operations includes file system operations." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation at Fig. 2, Item 118. The Applicant respectfully disagrees. Rather, claim 3 must be considered in conjunction with claims 1 and 2 from which it depends, as a whole. See, 35 U.S.C. § 103. As explained above in connection with claims 1, Tarenskeen does not disclose alternative routines which are selected based on a type of request received for access to data. Accordingly, Tarenskeen also does not disclose that such routines include first and second sets of operations or that such a first set of operations includes file system operations.

Therefore, this is another reason why claim 3 and its dependent claims 4-5 are allowable.

Claim 4

Claim 4 is dependent from claim 3 and recites "wherein the second set of operations includes standardized archival operations." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation at Fig. 2, Item 122. The Applicant respectfully disagrees. Rather, claim 4 must be considered in conjunction with

claims 1-3 from which it depends, as a whole. See, 35 U.S.C. § 103. As explained above in connection with claim 1, Tarenskeen does not disclose alternative routines which are selected based on a type of request received for access to data. Accordingly, Tarenskeen also does not disclose that such routines include first and second sets of operations or that such a first set of operations includes standardized archival operations.

Therefore, this is another reason why claim 4 and its dependent claim 5 is allowable.

Claim 5

Claim 5 stands or falls with claim 4 from which it depends.

Claim 6

Claim 6 is dependent from claim 1 and recites "wherein the first request type includes a request for one or more files from a file system." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation at Figure 2, item 188. The Applicant respectfully disagrees. Rather, claim 6 must be considered in conjunction with claim 1 from which it depends, as a whole. See, 35 U.S.C. § 103. As explained above in connection with claim 1, Tarenskeen does not disclose alternative routines which are selected based on a type of request received for access to data. Accordingly, Tarenskeen also does not disclose that a request type includes a request for one or more files from a file system.

Therefore, this is another reason why claim 6 and its dependent claims 8 and 9 are allowable.

Claim 7

Claim 7 is dependent from claim 1 and recites "wherein said presenting includes reformatting all of the data as a file structure." The office action mailed on Feb. 7, 2007, alleges that Sathyanarayan discloses this limitation in paragraphs [0018], [0024]-[0025], [0030], [0034], [0039] and [0049]. The Applicant respectfully disagrees. Rather, claim 7 must be considered in conjunction with claim 1 from which it depends, as a whole. See, 35 U.S.C. § 103. Therefore, claim 7 requires reformatting data stored in an archival format to a file structure. The Applicant has studied these portions of Sathyanarayan and is unable to find such a teaching.

Therefore, this is another reason why claim 7 is allowable.

Claim 8

Claim 8 is dependent from claim 6 and recites "wherein the second request type includes a request for one or more logical volumes." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation at Figure 1 and paragraphs [0001]-[0007], [0013]-[0014] and [0027]-[0028]. The Applicant respectfully disagrees. The Applicant has studied these portions of Tarenskeen and is unable to find any reference to a logical volume.

Therefore, this is another reason why claim 8 is allowable.

Claim 9

Claim 9 is dependent from claim 6 and recites "wherein the second request type includes a request for an image copy of the data." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation in its abstract and in paragraph [0050]. The Applicant respectfully disagrees. Claim 9 must be considered in conjunction with claim 1 from which it depends, as a whole. See, 35 U.S.C. § 103. As explained above in connection with claim 1, Tarenskeen does not disclose alternative routines which are selected based on a type of request received for access to data. Accordingly, Tarenskeen also does not disclose that such a request type includes a request for an image copy of the data.

Therefore, this is another reason why claim 9 is allowable.

Claim 10

Claim 10 is dependent from claim 1 and recites "wherein the first request type is by a first target system type and the second request type is by a second target system type." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation in its abstract and in paragraphs [0019]-[0023]. The Applicant respectfully disagrees. Claim 10 must be considered in conjunction with claim 1 from which it depends, as a whole. See, 35 U.S.C. § 103. As explained above in connection with claim 1, Tarenskeen does not disclose alternative routines which are selected based on a type of request received for access to data. Accordingly, Tarenskeen also does not disclose that the first request type is by a first target system type and the second request type is by a second target system type.

Therefore, this is another reason why claim 10 and its dependent claim 11 is allowable.

Claim 11

Claim 11 is dependent from claim 10 and recites "wherein said presenting the requested data includes formatting the data in accordance with the target system type." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation in its abstract and in paragraphs [0019]-[0023]. The Applicant respectfully disagrees. Rather, these portions of Tarenskeen describe operation of Tarenskeen's system for concurrent archive and restore. The Applicant has studied these portions of Tarenskeen and is unable to find a teaching of formatting data in accordance with a target system type.

Therefore, this is another reason why claim 11 is allowable.

Claim 12

Claim 12 is dependent from claim 1 and recites "wherein the program includes information about the data." The office action mailed on Feb. 7, 2007, alleges Tarenskeen discloses this limitation in paragraph [0026]. The Applicant respectfully disagrees. Rather, at paragraph [0026], Tarenskeen discusses use of an operating system. However, claim 12 must be considered in conjunction with claim 1 from which it depends, as a whole. See, 35 U.S.C. § 103. Therefore, claim 12 requires a program that is loaded from the same data storage medium that stores the data to be accessed and that

includes information about the data. The Applicant respectfully submits that Tarenskeen does not disclose such features.

Therefore, this is another reason why claim 12 and its dependent claim 13 are allowable.

Claim 13

Claim 13 stands or falls with claim 12 from which it depends.

Claim 14

Claim 14 stands or falls with claim 1 from which it depends.

Claim 15

Regarding claim 15, the office action indicates that Tarenskeen discloses all of its limitations in paragraphs [0019]-[0023] and [0053] except that Tarenskeen does not teach "access to the data in an archival format and in a non-archival format." See, office action mailed on Feb. 7, 2007, at pages 8-9. However, the office action alleges that Sathyanarayan teaches this feature at paragraphs [0001]-[0007], [0027-0028], [0031] and [0049]. See, office action mailed on Feb. 7, 2007 at page 9. The office action further alleges that it would have been obvious to combine the teachings of Tarenskeen with those of Sathyanarayan by repeating the alleged motivation discussed above with reference to claim 1. See, office action mailed on Feb. 7, 2007, at pages 9-10.

The Applicant respectfully traverses the rejection. Applicant's claim 15 recites "a computer usable medium having data stored thereon and having computer readable

program code stored thereon." The program code includes the routines for accessing the data. Therefore, the program code used to access the data is stored on the same data storage medium that stores the data to be accessed.

The office action mailed on Feb. 7, 2007, alleges that Tarenskeen teaches these features at paragraphs [0019]-[0023]. See, office action mailed on Feb. 7, 2007, at pages 8-9. The Applicant respectfully disagrees. Rather, these portions of Tarenskeen describe operation of Tarenskeen's system for concurrent archive and restore. Nowhere does Tarenskeen teach or suggest that program code used to access data is stored on the same data storage medium that stores the data to be accessed, as is required by Applicant's claim 15.

The office action mailed on Feb. 7, 2007, also alleges that Sathyanarayan teaches that a "software program and the accessible data are stored on the same disk" at paragraph [0019] of Sathyanarayan. The Applicant respectfully disagrees. This portion of Sathyanarayan merely discloses that data may be copied from one disk to another disk or from one disk to the same disk. Nowhere does Sathyanarayan teach or suggest that a program for accessing data is loaded from the same data storage medium that stores the data to be accessed, as is required by Applicant's claim 15.

Therefore, neither Tarenskeen, nor Sathyanarayan teach or suggest that program code used to access data is stored on the same data storage medium that stores the data to be accessed, as is required by Applicant's claim 15. For at least this reason, claim 15 and its dependent claims 16-21 and 29-30 are allowable over Tarenskeen and Sathyanarayan, taken singly or in combination.

In view of the above, the applicant respectfully requests removal of the rejection of claims 15-21 and 29-30.

Moreover, Applicant's claim 15 recites that the program used to access the data includes a first routine for accessing the data in response to a request for access to the data in an archival format and a second routine for accessing the data in response to a request for access to the data in a non-archival format. Therefore, Applicant's claim 15 requires that a routine used to access the data is chosen in response to the nature of the request received for access to the data.

The office action alleges that Sathyanarayan discloses this feature of claim 15 at paragraphs [0001]-[0007], [0027]-[0028], [0031] and [0049]. See, office action mailed on Feb. 7, 2007, at page 9. The Applicant respectfully disagrees. Rather, at paragraphs [0001]-[0007], Sathyanarayan discusses difficulties in using the PAX utility in copying file systems. At paragraphs [0027]-[0028], Sathyanarayan discusses allocation of memory for performing its file copying. And, at paragraph [0031], Sathyanarayan discusses copying of symbolic links. Finally, at paragraph [0049], Sathyanarayan discusses a function which writes a mail message to a file. Therefore, these portions of Sathyanarayan are completely unrelated to the feature of applicant's claim 15 which they are alleged to disclose, namely, that the routine used to access the data is chosen in response to the nature of the request received for access to the data. That Tarenskeen does not disclose this feature is admitted in the office action. See, office action mailed on Feb. 7, 2007, at page 9.

The office action mailed on Feb. 7, 2007, appears to imply that because Sathyanarayan mentions archiving utilities CPIO and TAR in paragraphs [0001] and

[0027] and because Sathyanarayan discusses copying files in paragraph [0028], this means that Sathyanarayan teaches that a routine used to access the data is chosen in response to the nature of the request received for access to the data, as in Applicant's claim 15. The Applicant's respectfully disagrees. It is clear from Applicant's claim 15 that the two recited routines are alternatives, in which one or the other is chosen depending upon whether the request is for access to the data is for an archival or a non-archival format. That the request is for an archival or a non-archival format are mutually exclusive alternatives. In no place does Sathyanarayan teach or suggest that the archiving utilities CPIO and TAR and file copying are alternatives which are chosen depending upon the nature of the request received.

Therefore, the Applicant respectfully submits that this feature of Applicant's claim 15 is not taught or suggested by Sathyanarayan or Tarenskeen, taken singly or in combination. This is another reason why the rejection of Applicant's claim 15 and dependent claims 16-21 and 29-30, should be removed.

Further, the Applicant respectfully submits that even if Tarenskeen and Sathyanarayan did separately disclose the claim limitations which they are alleged to disclose, it would not have been obvious to combine them in the manner suggested in the office action mailed on Feb. 7, 2007. The Applicant discussed above several reasons why it would not have been obvious to combine the Sathyanarayan and Tarenskeen references in the manner suggested in the office action. Particularly, Sathyanarayan is specifically directed toward archiving a file system, whereas, Tarenskeen, is specifically directed toward migrating a database system. Therefore, because Sathyanarayan and Tarenskeen are each separately directed toward dealing with the unique characteristics of

file systems or databases, the Applicant respectfully submits that there would not have been a reason to combine them in the manner suggested in the office action. In addition, the Applicant respectfully submits that the motivations alleged in the office action would not have provided a reason to combine the references. Particularly, while Tarenskeen and Sathyanarayan both discuss speed considerations (see Tarenskeen at paragraphs [0005]-0006] and Sathyanarayan at paragraph [0009]), each separately resolves this issue in a unique environment. Therefore, it would have not have been obvious that any features of Sathyanarayan that would be useful in the system of Tarenskeen. Also, because Tarenskeen discusses and, then, dismisses as ineffective, the possibility of utilizing multiple threads for database migration in paragraph [0005], Tarenskeen teaches away from incorporating any features from Sathyanarayan into the system of Tarenskeen. This is because since Sathyanarayan obtains its speed improvements by employing multiple threads. Finally, the alleged motivation based on a desire to "minimize problems caused by the different types of storage devices having different storage formats," is alleged to be based on paragraphs [0003]-[0007] Sathyanarayan. However, this portion of Sathyanarayan does not discuss problems caused by different types of storage devices having different storage formats. Rather, this alleged motivation appears to have come from the Applicant's own disclosure since the Applicant discusses difficulties in dealing with different data formats at page 1, lines 9-31. However, the Applicant's own disclosure cannot properly provide a motivation for combining prior art references. Therefore, the Applicant respectfully submits that this is another reason why it would not have been obvious to combine the Tarenskeen and Sathyanarayan references.

In view of the above, the Applicant respectfully request reversal of the rejection of claim 15 and dependent claims 16-21 and 29-30.

Claim 16

Claim 16 is dependent from claim 15 and recites "wherein said second routine supports accessing the data as a logical volume." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation at Figure 1 and paragraphs [0001]-[0007], [0013]-[0014] and [0027]-[0028]. The Applicant respectfully disagrees. The Applicant has studied these portions of Tarenskeen and is unable to find any reference to a logical volume or to support of access to data as a logical volume.

Therefore, this is another reason why claim 16 is allowable.

Claim 17

Claim 17 is dependent from claim 15 and recites "wherein said first routine supports accessing the data as an image copy." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation in its abstract and in paragraph [0050]. The Applicant respectfully disagrees. Claim 17 must be considered in conjunction with claim 15 from which it depends, as a whole. See, 35 U.S.C. § 103. As explained above in connection with claim 15, Tarenskeen does not disclose alternative routines which are chosen in response to the nature of the request received for access to the data. Accordingly, Tarenskeen also does not disclose that such a request includes a request for an image copy of the data.

Therefore, this is another reason why claim 17 is allowable.

Claim 18

Claim 18 stands or falls with claim 15 from which it depends.

Claim 19

Claim 19 stands or falls with claim 15 from which it depends.

Claim 20

Claim 20 is dependent from claim 15 and recites "wherein the program code includes information about the data." The office action mailed on Feb. 7, 2007, alleges Sathyanarayan discloses this limitation in its abstract and paragraphs [0018], [0024]-[0025], [0030], [0034], [0039], and [0049]. The Applicant respectfully disagrees. Rather, claim 20 must be considered in conjunction with claim 15 from which it depends, as a whole. See, 35 U.S.C. § 103. Therefore, claim 20 requires that the program code used to access the data is stored on the same data storage medium that stores the data to be accessed and that such program code includes information about the data. Sathyanarayan does not disclose such features.

Therefore, this is another reason why claim 20 and its dependent claim 21 are allowable.

Claim 21

Claim 21 stands or falls with claim 20 from which it depends.

Claim 22

Regarding claim 22, the office action indicates that Tarenskeen discloses all of its limitations in paragraphs [0019]-[0023] and [0053] except that Tarenskeen does not teach "a request from [a] first target system type and a request from a second target system type." See, office action mailed on Feb. 7, 2007, at page 12. However, the office action alleges that Sathyanarayan teaches this feature at paragraphs [0001]-[0007], [0027-0028], [0031] and [0049]. See, office action mailed on Feb. 7, 2007 at page 12. The office action further alleges that it would have been obvious to combine the teachings of Tarenskeen with those of Sathyanarayan by repeating the alleged motivation discussed above with reference to claim 1. See, office action mailed on Feb. 7, 2007, at page 13.

The Applicant respectfully traverses the rejection. Applicant's claim 22 recites "a computer usable medium having data stored thereon and having computer readable program code stored thereon." The program code includes the routines for accessing the data. Therefore, the program code used to access the data is stored on the same data storage medium that stores the data to be accessed.

The office action mailed on Feb. 7, 2007, alleges that Tarenskeen teaches these features at paragraphs [0019]-[0023]. See, office action mailed on Feb. 7, 2007, at page 12. The Applicant respectfully disagrees. Rather, these portions of Tarenskeen describe operation of Tarenskeen's system for concurrent archive and restore. Nowhere does Tarenskeen teach or suggest that program code used to access data is stored on the same data storage medium that stores the data to be accessed, as is required by Applicant's claim 22.

The office action mailed on Feb. 7, 2007, also alleges that Sathyanarayan teaches that a "software program and the accessible data are stored on the same disk" at paragraph [0019] of Sathyanarayan. See, office action mailed on Feb. 7, 2007, at page 5. The Applicant respectfully disagrees. This portion of Sathyanarayan merely discloses that data may be copied from one disk to another disk or from one disk to the same disk. Nowhere does Sathyanarayan teach or suggest that a program for accessing data is loaded from the same data storage medium that stores the data to be accessed, as is required by Applicant's claim 22.

Therefore, neither Tarenskeen, nor Sathyanarayan teach or suggest that program code used to access data is stored on the same data storage medium that stores the data to be accessed, as is required by Applicant's claim 22. For at least this reason, claim 22 and its dependent claims 23-24 and 31-32 are allowable over Tarenskeen and Sathyanarayan, taken singly or in combination.

In view of the above, the applicant respectfully requests removal of the rejection of claims 22-24 and 31-32.

Moreover, Applicant's claim 22 recites that the program used to access the data includes a first routine for accessing the data in response to a request from a first target system type and a second routine for accessing the data in response to a request from a second target system type. Therefore, Applicant's claim 22 requires that a routine used to access the data is chosen in response to the type of system from which the request for access to the data is received.

The office action alleges that Sathyanarayan discloses this feature of claim 22 at paragraphs [0001]-[0007], [0027]-[0028], [0031] and [0049]. See, office action mailed

on Feb. 7, 2007, at page 12. The Applicant respectfully disagrees. Rather, at paragraphs [0001]-[0007], Sathyanarayan discusses difficulties in using the PAX utility in copying file systems. At paragraphs [0027]-[0028], Sathyanarayan discusses allocation of memory for performing its file copying. And, at paragraph [0031], Sathyanarayan discusses copying of symbolic links. Finally, at paragraph [0049], Sathyanarayan discusses a function which writes a mail message to a file. Therefore, these portions of Sathyanarayan are completely unrelated to the feature of applicant's claim 22 which they are alleged to disclose, namely, that the routine used to access the data is chosen in response to the type of system from which the request for access to the data is received. That Tarenskeen does not disclose this feature is admitted in the office action. See, office action mailed on Feb. 7, 2007, at page 12.

The office action mailed on Feb. 7, 2007, appears to imply that because Sathyanarayan mentions archiving utilities CPIO and TAR in paragraphs [0001] and [0027] and because Sathyanarayan discusses copying files in paragraph [0028], this means that Sathyanarayan teaches that a routine used to access the data is chosen in response to the type of system from which the request for access to the data is received, as in Applicant's claim 22. The Applicant's respectfully disagrees. It is clear from Applicant's claim 22 that the two recited routines are alternatives, in which one or the other is chosen depending upon whether the request is for access to the data is received from a first system type or a second system type. In no place does Sathyanarayan teach or suggest that the archiving utilities CPIO and TAR and file copying are alternatives which are chosen depending upon the type of system from which the request for access to the data is received.

Therefore, the Applicant respectfully submits that this feature of Applicant's claim 22 is not taught or suggested by Sathyanarayan or Tarenskeen, taken singly or in combination. This is another reason why the rejection of Applicant's claim 22 and dependent claims 23-24 and 31-32, should be removed.

Further, the Applicant respectfully submits that even if Tarenskeen and Sathyanarayan did separately disclose the claim limitations which they are alleged to disclose, it would not have been obvious to combine them in the manner suggested in the office action mailed on Feb. 7, 2007. The Applicant discussed above several reasons why it would not have been obvious to combine the Sathyanarayan and Tarenskeen references in the manner suggested in the office action. Particularly, Sathyanarayan is specifically directed toward archiving a file system, whereas, Tarenskeen, is specifically directed toward migrating a database system. Therefore, because Sathyanarayan and Tarenskeen are each separately directed toward dealing with the unique characteristics of file systems or databases, the Applicant respectfully submits that there would not have been a reason to combine them in the manner suggested in the office action. In addition, the Applicant respectfully submits that the motivations alleged in the office action would not have provided a reason to combine the references. Particularly, while Tarenskeen and Sathyanarayan both discuss speed considerations (see Tarenskeen at paragraphs [0005]-0006] and Sathyanarayan at paragraph [0009]), each separately resolves this issue in a unique environment. Therefore, it would have not have been obvious that any features of Sathyanarayan that would be useful in the system of Tarenskeen. Also, because Tarenskeen discusses and, then, dismisses as ineffective, the possibility of utilizing multiple threads for database migration in paragraph [0005], Tarenskeen teaches

away from incorporating any features from Sathyanarayan into the system of Tarenskeen. This is because Sathyanarayan obtains its speed improvements by employing multiple threads. Finally, the alleged motivation based on a desire to "minimize problems caused by the different types of storage devices having different storage formats," is alleged to be based on paragraphs [0003]-[0007] Sathyanarayan. However, this portion of Sathyanarayan does not discuss problems caused by different types of storage devices having different storage formats. Rather, this alleged motivation appears to have come from the Applicant's own disclosure since the Applicant discusses difficulties in dealing with different data formats at page 1, lines 9-31. However, the Applicant's own disclosure cannot properly provide a motivation for combining prior art references. Therefore, the Applicant respectfully submits that this is another reason why it would not have been obvious to combine the Tarenskeen and Sathyanarayan references.

In view of the above, the Applicant respectfully request reversal of the rejection of claim 22 and dependent claims 23-24 and 31-32.

Claim 23

Claim 23 is dependent from claim 22 and recites "wherein said program presents the requested data formatted in accordance with the target system type." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation in its abstract and in paragraphs [0019]-[0023]. The Applicant respectfully disagrees. Rather, these portions of Tarenskeen describe operation of Tarenskeen's system for concurrent archive and restore. The Applicant has studied these portions of Tarenskeen and is unable to find a teaching of formatting data in accordance with a target system type.

Therefore, this is another reason why claim 23 is allowable.

Claim 24

Claim 24 stands or falls with claim 22 from which it depends.

Claim 25

Regarding claim 25, the office action indicates that Tarenskeen discloses all of its limitations in its abstract and in paragraphs [0019]-[0023] and [0053] except that Tarenskeen does not teach "a first request type and a second request type." See, office action mailed on Feb. 7, 2007, at pages 14-15. However, the office action alleges that Sathyanarayan teaches this feature at paragraphs [0001]-[0007], [0027-0028], [0031] and [0049]. See, office action mailed on Feb. 7, 2007 at page 14. The office action further alleges that it would have been obvious to combine the teachings of Tarenskeen with those of Sathyanarayan by repeating the alleged motivation discussed above with reference to claim 1. See, office action mailed on Feb. 7, 2007, at page 15.

The Applicant respectfully traverses the rejection. Independent claim 25 recites "a computer usable medium having data stored thereon and having computer readable program code stored on secondary storage associated with the computer usable medium ... wherein the secondary storage is built into a cartridge for the data storage media." In other words, claim 25 recites a cartridge for a data storage medium wherein data stored is stored on the medium and also recites secondary storage built into the cartridge wherein program code for accessing the data is stored on the secondary storage.

The office action mailed on Feb. 7, 2007, alleges that Tarenskeen teaches this feature at paragraphs [0019]-[0023]. See, office action mailed on Feb. 7, 2007, at page 12. The Applicant respectfully disagrees. Rather, these portions of Tarenskeen describe operation of Tarenskeen's system for concurrent archive and restore. Nowhere does Tarenskeen teach or suggest data storage in a cartridge and secondary storage built into the cartridge wherein program code for accessing the data is stored on the secondary storage, as is required by Applicant's claim 25. Sathyanarayan does not disclose this feature either.

Therefore, neither Tarenskeen, nor Sathyanarayan teach or suggest data storage in a cartridge and secondary storage built into the cartridge wherein program code for accessing the data is stored on the secondary storage, as is required by Applicant's claim 25. For at least this reason, claim 25 and its dependent claim 33 is allowable over Tarenskeen and Sathyanarayan, taken singly or in combination.

In view of the above, the applicant respectfully requests removal of the rejection of claims 25 and 33.

Moreover, Applicant's claim 25 recites that the program used to access the data includes a first routine for accessing the data in response to a request of a first request type and a second routine for accessing the data in response to a second request type. Therefore, Applicant's claim 25 requires that a routine used to access the data is chosen in response to the type of request that is received.

The office action alleges that Sathyanarayan discloses this feature of claim 25 at paragraphs [0001]-[0007], [0027]-[0028], [0031] and [0049]. See, office action mailed on Feb. 7, 2007, at page 15. The Applicant respectfully disagrees. Rather, at paragraphs

[0001]-[0007], Sathyanarayan discusses difficulties in using the PAX utility in copying file systems. At paragraphs [0027]-[0028], Sathyanarayan discusses allocation of memory for performing its file copying. And, at paragraph [0031], Sathyanarayan discusses copying of symbolic links. Finally, at paragraph [0049], Sathyanarayan discusses a function which writes a mail message to a file. Therefore, these portions of Sathyanarayan are completely unrelated to the feature of applicant's claim 25 which they are alleged to disclose, namely, that the routine used to access the data is chosen in response to the type of request for access to the data that is received. That Tarenskeen does not disclose this feature is admitted in the office action. See, office action mailed on Feb. 7, 2007, at page 15.

The office action mailed on Feb. 7, 2007, appears to imply that because Sathyanarayan mentions archiving utilities CPIO and TAR in paragraphs [0001] and [0027] and because Sathyanarayan discusses copying files in paragraph [0028], this means that Sathyanarayan teaches that a routine used to access the data is chosen in response to the type of system from which the request for access to the data is received, as in Applicant's claim 25. The Applicant respectfully disagrees. It is clear from Applicant's claim 25 that the two recited routines are alternatives, in which one or the other is chosen depending upon the type of request received. In no place does Sathyanarayan teach or suggest that the archiving utilities CPIO and TAR and file copying are alternatives which are chosen depending upon the type of request received.

Therefore, the Applicant respectfully submits that this feature of Applicant's claim 25 is not taught or suggested by Sathyanarayan or Tarenskeen, taken singly or in

combination. This is another reason why the rejection of Applicant's claim 25 and dependent claim 33 should be removed.

Further, the Applicant respectfully submits that even if Tarenskeen and Sathyanarayan did separately disclose the claim limitations which they are alleged to disclose, it would not have been obvious to combine them in the manner suggested in the office action mailed on Feb. 7, 2007. The Applicant discussed above several reasons why it would not have been obvious to combine the Sathyanarayan and Tarenskeen references in the manner suggested in the office action. Particularly, Sathyanarayan is specifically directed toward archiving a file system, whereas, Tarenskeen, is specifically directed toward migrating a database system. Therefore, because Sathyanarayan and Tarenskeen are each separately directed toward dealing with the unique characteristics of file systems or databases, the Applicant respectfully submits that there would not have been a reason to combine them in the manner suggested in the office action. In addition, the Applicant respectfully submits that the motivations alleged in the office action would not have provided a reason to combine the references. Particularly, while Tarenskeen and Sathyanarayan both discuss speed considerations (see Tarenskeen at paragraphs [0005]-0006] and Sathyanarayan at paragraph [0009]), each separately resolves this issue in a unique environment. Therefore, it would have not have been obvious that any features of Sathyanarayan that would be useful in the system of Tarenskeen. Also, because Tarenskeen discusses and, then, dismisses as ineffective, the possibility of utilizing multiple threads for database migration in paragraph [0005], Tarenskeen teaches away from incorporating any features from Sathyanarayan into the system of Tarenskeen. This because Sathyanarayan obtains its speed improvements by employing multiple

threads. Finally, the alleged motivation based on a desire to "minimize problems caused by the different types of storage devices having different storage formats," is alleged to be based on paragraphs [0003]-[0007] Sathyanarayan. However, this portion of Sathyanarayan does not discuss problems caused by different types of storage devices having different storage formats. Rather, this alleged motivation appears to have come from the Applicant's own disclosure since the Applicant discusses difficulties in dealing with different data formats at page 1, lines 9-31. However, the Applicant's own disclosure cannot properly provide a motivation for combining prior art references. Therefore, the Applicant respectfully submits that this is another reason why it would not have been obvious to combine the Tarenskeen and Sathyanarayan references.

In view of the above, the Applicant respectfully request reversal of the rejection of claim 25 and dependent claim 33.

Claim 27

Claim 27 stands or falls with claim 1 from which it depends.

Claim 28

Claim 28 is dependent from claim 1 and recites "wherein the data storage medium is removable." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation at paragraph [0053]. The Applicant respectfully disagrees. Rather, claim 28 must be considered in conjunction with claim 1 from which it depends, as a whole. See, 35 U.S.C. § 103. Therefore, claim 28 requires a program that is loaded from the same data storage medium that stores the data to be accessed and that such a

data storage medium is removable. The Applicant respectfully submits that Tarenskeen does not disclose such features.

Therefore, this is another reason why claim 28 is allowable.

Claim 29

Claim 29 stands or falls with claim 15 from which it depends.

Claim 30

Claim 30 is dependent from claim 15 and recites "wherein the data storage medium is removable." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation at paragraph [0053]. The Applicant respectfully disagrees. Rather, claim 30 must be considered in conjunction with claim 15 from which it depends, as a whole. See, 35 U.S.C. § 103. Therefore, claim 30 requires that the program code used to access the data is stored on the same data storage medium that stores the data to be accessed and that such a data storage medium is removable. The Applicant respectfully submits that Tarenskeen does not disclose such features.

Therefore, this is another reason why claim 30 is allowable.

Claim 31

Claim 31 is dependent from claim 22 and recites "wherein the data is stored in accordance with an archival format." The office action mailed on Feb. 7, 2007, alleges Sathyanarayan discloses this limitation in paragraphs [0005] and [0007]. The Applicant respectfully disagrees. Rather, claim 31 must be considered in conjunction with claim 22

from which it depends, as a whole. See, 35 U.S.C. § 103. Therefore, claim 31 requires that the program code used to access the data is stored on the same data storage medium that stores the data to be accessed and that such data is stored in accordance with an archival format. Sathyanarayan does not disclose such features.

Therefore, this is another reason why claim 31 and is allowable.

Claim 32

Claim 32 is dependent from claim 22 and recites "wherein the data storage medium is removable." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation at paragraph [0053]. The Applicant respectfully disagrees. Rather, claim 32 must be considered in conjunction with claim 22 from which it depends, as a whole. See, 35 U.S.C. § 103. Therefore, claim 32 requires that the program code used to access the data is stored on the same data storage medium that stores the data to be accessed and that such a data storage medium is removable. The Applicant respectfully submits that Tarenskeen does not disclose such features.

Therefore, this is another reason why claim 32 is allowable.

Claim 33

Claim 33 is dependent from claim 25 and recites "wherein the data storage medium is removable." The office action mailed on Feb. 7, 2007, alleges that Tarenskeen discloses this limitation at paragraph [0053]. The Applicant respectfully disagrees. Rather, claim 33 must be considered in conjunction with claim 15 from which it depends, as a whole. See, 35 U.S.C. § 103. Therefore, claim 33 requires that is data

stored in a cartridge, that program code for accessing the data is stored in secondary storage built into the cartridge, and that such a data storage medium is removable. The Applicant respectfully submits that Tarenskeen does not disclose such features.

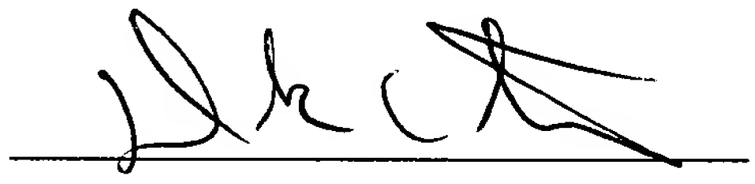
Therefore, this is another reason why claim 33 is allowable.

c. Conclusion

In view of the above, the Applicant submits that all of the pending claims are allowable over the cited art. Accordingly, the Applicant requests that the rejections be reversed.

Respectfully Submitted,

Dated: Nov. 6, 2007



Derek J. Westberg (Reg. No. 40,872)

(viii) Claims Appendix

1. A method of retrieving data from a data storage medium comprising:

loading a program from the data storage medium into a computer system, the program including at least a first routine for responding to a first request type for access to data stored on the data storage medium and a second routine for responding to a second request type for access to the same data stored on the data storage medium, the data being stored in accordance with an archival format;

receiving a request for access to data stored on the data storage medium;

determining whether the request is of the first type or the second type;

calling the first routine for accessing the data when the request is of the first type and calling the second routine for accessing the data when the request is of the second type; and

presenting the requested data.

2. The method according to claim 1, wherein the first routine implements a first set of operations and the second routine implements a second set of operations.

3. The method according to claim 2, wherein the first set of operations includes file system operations.

4. The method according to claim 3, wherein the second set of operations includes standardized archival operations.

5. The method according to claim 4, wherein the second set of operations includes operations selected from CPIO and TAR.

6. The method according to claim 1, wherein the first request type includes a request for one or more files from a file system.

7. The method according to claim 1, wherein said presenting includes reformatting all of the data as a file structure.

8. The method according to claim 6, wherein the second request type includes a request for one or more logical volumes.

9. The method according to claim 6, wherein the second request type includes a request for an image copy of the data.

10. The method according to claim 1, wherein the first request type is by a first target system type and the second request type is by a second target system type.

11. The method according to claim 10, wherein said presenting the requested data includes formatting the data in accordance with the target system type.

12. The method according to claim 1, wherein the program includes information about the data.

13. The method according to claim 12, wherein the information about the data includes a file system directory.

14. The method according to claim 1, wherein the data is stored on the data storage medium as raw data blocks.

15. An article of manufacture comprising a computer usable medium having data stored thereon and having computer readable program code stored thereon, the computer readable program code including a first routine for accessing the data in response to a request for access to the data in an archival format and a second routine for accessing the data in response to a request for access to the data in a non-archival format.

16. The article according to claim 15, wherein said second routine supports accessing the data as a logical volume.

17. The article according to claim 15, wherein said first routine supports accessing the data as an image copy.

18. The article according to claim 15, wherein the second routine supports accessing all of the data as a file structure.

19. The article according to claim 15, wherein the second routine supports accessing the data as at least one specified file.

20. The article according to claim 15, wherein the program code includes information about the data.

21. The article according to claim 20, wherein the information about the data includes a file system directory.

22. An article of manufacture comprising a computer usable medium having data stored thereon and having computer readable program code stored thereon, the computer readable program code including a first routine for accessing the data in response to a request from a first target system type and a second routine for accessing the data in response to a request from a second target system type.

23. The article according to claim 22, wherein said program presents the requested data formatted in accordance with the target system type.

24. The article according to claim 23, wherein the data is stored on the data storage medium as raw data blocks.

25. An article of manufacture comprising a computer usable data storage medium having data stored thereon and having computer readable program code stored on secondary storage associated with the data storage medium, the computer readable program code including a first routine for accessing the data in response to a request of a first request type and a second routine for accessing the data in response to a second request type, wherein the secondary storage is built into a cartridge for the data storage medium.

27. The method according to claim 1, wherein the data is stored on the data storage medium as one or more raw data blocks.

28. The method according to claim 1, wherein the data storage medium is removable.

29. The article of manufacture according to claim 15, wherein said first routine supports accessing the data as one or more raw data blocks.

30. The article of manufacture according to claim 15, wherein the data storage medium is removable.

31. The article of manufacture according to claim 22, wherein the data is stored in accordance with an archival format.

32. The article of manufacture according to claim 22, wherein the data storage medium is removable.

33. The article of manufacture according to claim 25, wherein the data storage medium is removable.

(ix) Evidence Appendix

None.

(x) Related Proceedings Appendix

None